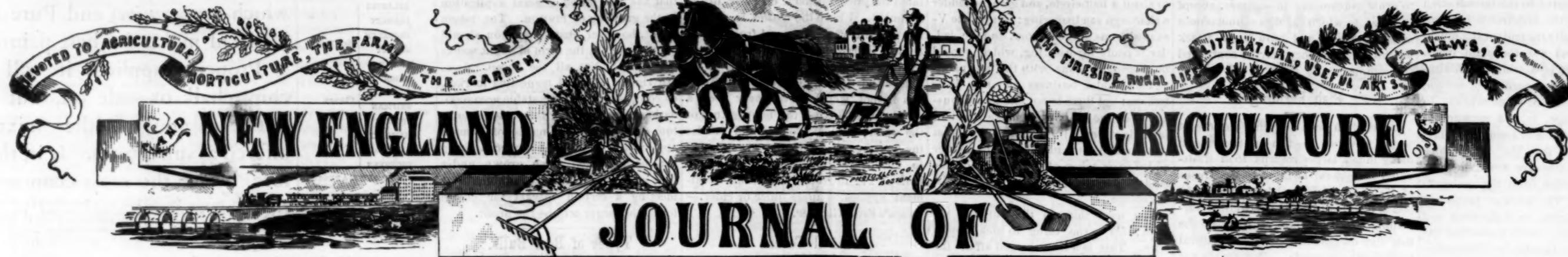


MASSACHUSETTS PLOUGHMAN



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MASSACHUSETTS PLOUGHMAN
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Correspondence from particular farmers, giving the results of their experiments, to "The PloUGHMAN" may be used. Its columns must sign their name, not necessarily for publication, but as a guarantee of good faith, otherwise they will be returned.

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AGRICULTURAL.

The daughter of the late William L. Bradley of Boston, originator of the fertilizer business still conducted under his name, has recently given \$20,000 to Harvard University, the income to be expended in increasing the knowledge of trees, in which and their planting her father was much interested.

The trade in condensed milk is rapidly growing, and yet the factories are so few that the business is practically a monopoly. It is probable that co-operations for this purpose would prove more remunerative than creameries. A gallon of milk makes about three pounds of condensed milk.

A CORRECTION.—In the article published in our last issue on "How to Pick Apples" by J. H. Gregory, a comparison was made between the keeping qualities of apparently sound windfalls and apples carefully hand-picked. The article stated that within two months, nearly a third of the former were found to be decayed as compared with a fourth of the latter. It should have read a fourth. In justice to ourselves it should be stated that the error was made in the paper in which the article originally appeared.

The great McNair fruit farm, which consists of 2036 acres, is located at St. Elmo, near Thayer, Mo. The start was made in June, 1893. One hundred and fifty men were put to work clearing the ground and preparing it for fruit-tree planting. By January 1, 1894, 36,400 trees had been set out. Six hundred and eighty acres will be planted in peaches this fall. On his premises he already has 20,400 Elberta peach trees three years old. There are 20,000 apple and 3000 peach trees already planted on the farm. By far the most interesting sight on this great fruit farm is a herd of fourteen buffalo. There is only one other herd on the continent. Most of the fruit grown on the farm is marketed in the East and England.—American Gardening.

It is not always the cow that gives the largest amount of milk that is the most profitable. It is an easy matter to test your cows and find out which ones are paying and which are not. A writer in Hoard's Dairyman says he was completely upset by the test he made. One little grade Jersey, that would not weigh over 800 pounds, he found was yielding a pound and a quarter of butter a day on an average flow of twenty-five pounds of milk. Other cows that he supposed were worth nearly double the value of the little cow were giving thirty pounds of milk a day, which would only make a pound of butter. He was convinced that the little cow gave him at least 300 pounds of butter a year, while the others would not yield over 200 pounds. Further, he was certain that the little cow did her work on less feed than the other poorer and larger cows.

PROF. BYRON D. HALSTEAD, of the New Jersey Experiment Station, recommends the following treatment for celery fields infested with rust: There are two general methods of checking the rust, namely, by destroying the

spores and by preventing their growing upon and getting a foot-hold in the substance of healthy asparagus plants. The rust fungi are among the most difficult to check—by protecting the plants they feed upon—by means of fungicides, Bordeaux mixtures, etc., sprayed upon them during the growing season. While something may be hoped for with the spraying pump, the chief method of eradication lies in the destruction of the many spores. This can be done in a very simple and effective manner by carefully gathering all the parts of the asparagus plants that are above ground and burning them. It would be a waste of time to stack the tops and leave them to natural decay; and to place them in manure heaps would be still worse. The only safe thing to do when a serious enemy like this is in the asparagus field is to burn the plants even to the last scrap that can be gathered up. Let this be done at once, for any delay means the breaking up of the brittle, rusty plants, and a generous sowing of the spores upon the ground. If the fire could go over the whole and burn all the small as well as the large pieces, that would be the best of all.

To Prepare Bones.

EDITOR OF MASSACHUSETTS PLOUGHMAN, Dear Sir—I have a lot of odds and ends of old bones, perhaps nearly a ton on my farm, but owing to the promiscuous sizes and shapes they are of no use to me. Is there any way that an ordinary farmer can dissolve these, or is there any machine for crushing or cutting them into small pieces or dust so that they will be valuable as a fertilizer? Any information your readers can give on this point would be valuable. A. B. C.

The best way to work up small quantities of bones on the farm is to pile them with unleached hard wood ashes, using about twice or three times the bulk of ashes. Moisten the pile while building it and cover it with an inch or so of loam; after a week or two, turn the pile over and the bones will be found softened as to crumble in handling. If any large lumps have escaped the action of the ashes, throw them aside to be worked up with the next lot.—ED.

Salting Cows.

Salting the cows is one of the little things that is sometimes lost sight of under the pressure of other, and what is regarded as more important work, but a trial recently made at the Mississippi Experiment Station, indicates that inattention to this point may be a rather expensive oversight. Three cows were kept without salt for four weeks, and their milk record kept during the last two weeks of this period; then they were given the usual allowance of salt for two weeks, and on comparing the milk records it was found that the cows gave 454 pounds of milk during the first period when salt was withheld and 564 pounds during the second, when salt was furnished, a difference of 110 pounds of milk in two weeks in favor of salting.

Fruit on the Dairy Farm.

I do not think dairymen value a liberal supply of fruit as they should. It certainly is a fact that fruit may be made to bring in no little income if properly managed. It often happens that the dairymen when marketing his butter can dispose of a good many apples or other fruits. I know of one man who has a few trees of Red Astrachan apples. He says he has made more money from those few trees than from all the rest of his orchard. They are prolific bearers, and the fruit matures early at a time when there is a great scarcity of good cooking apples.

Berries also will put many a dollar into the pocket of the dairymen. This is coming to be in many parts of New York State a valuable adjunct to the dairy. A few hundred strawberry plants or raspberry canes, well cared for, will add not a few dollars to the purse of the man who has energy enough to set them out and cultivate them. One man I know of has sold many dollars worth this season. When he delivers an order of butter he takes along a few baskets of berries and never fails of a sale at good prices. The present has been an excellent year with us to get such plants started. I have put out a patch to raspberries and also made a venture in the line of strawberries.

There is no reason why the dairyman, as well as the general farmer, should not have plenty of fruit in its season. Surely, nothing stands in the way except a little push and continual energy. It is not enough to set out the plants, they must be cared for right along or the response will be slight.

When I came on my present farm eight years ago I set out sixty apple trees. These I have kept trimmed and as free from burs as I could, and am now gathering some choice fruit from their branches. Last year one of these little trees bore a bushel of beautiful fruit, and how well it kept may be known when I say that after everything else was gone this spring we had hard and juicy fruit from that little Ben Davis tree. How pretty it looked, too, last fall with its branches bending low with that choice fruit.

The sight of it almost paid me for all the care I had taken of the tree. This year I have some nice russets growing. The yield of apples last year was wonderful and we did not expect much this year, but in some localities the supply will exceed the home demand. Plum trees are loaded to breaking with us. It is to be hoped that the time will soon come when all dairymen will add fruit-growing to their field of labor.

E. L. VINCENT,
Broome Co., N. Y.

Corn Smut.

The question is often asked whether corn smut is injurious to cattle when the fodder is infested with it.

Professor Henry of the Wisconsin Experiment Station, and Prof. Clinton D. Smith of the Michigan Station have investigated this matter with results that agree. The following is from a bulletin of the latter station:

"Corn smut in varying amounts was fed to three grades Short-horn cows and one grade Jersey cow in addition to a ration of corn, wheat bran, ground oats and linseed meal. The cows were in different stages of lactation. Two cows were fed as large quantities of the smut as they could be induced to eat, the amount being increased from two ounces at the start to eleven pounds per day. The other two cows were fed moderate amounts, the smut being increased from two ounces, at the start, to one pound per day. The composition of corn smut was found to be as follows:

COMPOSITION OF CORN SMUT.

	Percent.
Water	8.30
Albuminoids	13.06
Carbohydrates	25.69
Cellulose	24.69
Sugar	4.00
Fats	1.35
Ash—considerable sand	22.50

"The test lasted forty-nine days. The gains in weight for each cow are recorded, as well as the temperature which was taken on alternate days. At the beginning of the test, the cows ate the smut very readily, and the two re-

ceiving it in moderate quantities continued to prefer it to the grain ration up to the close of the test. On the other hand, the cows receiving large quantities did not eat it so readily, though it was never entirely rejected. The ash of the corn smut was found to be rich in phosphates of potash and magnesia, like the ash of grain.

In the analyst's opinion, the high percentage of ash was due to sand, which was accidentally present. The smut was examined for poisonous alkaloids, but none were found. The sugar in the smut may, in the author's opinion, account for the readiness with which the cattle ate it.

"The pregnant cows were watched for signs of abortion, but none appeared.

"Their milk yield was regular and constant, in the case of the cows giving milk, and no indication was given of any variation in this respect from normal conditions.

"The conclusion which can be safely drawn from this experiment is, that when cows are gradually brought into the habit of consuming large quantities of smut, it does not seem hurtful to them. Whether the same thing would be true, where cows unaccustomed to smut suddenly gain access to large quantities of it must remain for future experiment. It is safe to say, however, that any quantity of smut that would be at all likely to exist in a cornfield, or on the stalks as fed under normal conditions to cows would not be dangerous to the health of the animals."

Lime and Liming.

Experiments have been conducted at the Rhode Island Experiment Station as to the effect of lime upon the growth of more than one hundred varieties of plants, and the results, as described in Bulletin 46 of that station, have shown that while a few have been injured by it, especially if grown the same season it was applied, others are uninjured by it or much benefited. Experiments were also conducted as to the best form in which to apply it, and it was found that to be the most effective, it must be applied in the form of air or water-slacked lime, or of calcium carbonate (carbonate of lime).

By uniting with the acid substances in the soil, lime sweetens the soil, and in case certain injurious iron compounds are present in the soil, liming so changes them as to render them harmless. It also acts upon potash compounds so that the lime takes the place of the potash, setting the latter free for the use of the plants. Lime favors the decomposition of any organic matter present, and also helps to free the stored up nitrogen in the soil. Excessive amounts of caustic lime may prove injurious to plants usually helped by it, especially if the soil were but slightly acid.

Lime also causes stiff clay to become more friable, more permeable to the air, easier of tillage and better capable of supplying water to plants as needed. It renders sandy soil more compact and more retentive of holding water and fertilizers. Very dry, sandy soils require smaller applications than moist ones, and the use of large quantities of lime, in single applications, for such soils is not advisable.

As lime in its caustic state is injurious to certain crops, and by lying in the soil, its causticity is soon lost or materially decreased, the ideal time to apply it is in the autumn. When autumn seed is sown upon the square rod in the autumn, the lime should be sown upon the furrows after plowing and then most thoroughly harrowed in, for the degree of benefit from liming depends largely upon its even distribution and complete incorporation with the surface soil. When seeding Indian corn fields to grass at the last hoeing, as is done in the Connecticut Valley in Massachusetts, it is advisable to apply the lime as outlined above after plowing the land in the spring for the Indian corn crop. Under other circumstances, it is probably better not to lime just before Indian corn or rye, as these crops have been the seasons of most rot. A moist atmosphere favors the development of the fungus in the leaves and stems; the rains assist in conveying the germs (spores) from the foliage to the

Indian corn, the maturity of the crop is usually hastened by liming, sometimes nearly a week, rendering it less liable to injury by early frost, and giving more time in the autumn after the removal of the corn for the grass to gain a firm foothold before the winter sets in.

If the lime is thoroughly worked into the soil, it may be applied in the spring, for certain plants, with little or no risk and usually with great advantage. This seems to be true of beets of all kinds, lettuce, spinach, cauliflower, kohlrabi, onions, muskmelons, cantaloupes, salsify, cabbage, peppers and many other plants. As indicated by the experiments at the station, ordinary millet, golden millet, and Hungarian grass are best sown a year or more after liming.

In ordinary rotations, extending over intervals of from five to seven years, it is seldom necessary to lime more than once in the rotation, unless some crop, like beets, onions, cucumbers, etc., which are particularly helped by lime, is a part of the rotation, but unless the soil was very deficient in lime, this might not be necessary. Where meadows are kept in grass for long periods, and where annual top dressing with stable manure is not resorted to, but, its' stead, frequent dressings with ordinary commercial fertilizer, an additional liming upon the grass might be desirable at intervals of five or six years.

The quantity of lime at a single application varies, under different conditions, from half a ton to three and even four tons an acre. The old method of liming heavily at rare intervals has now given way to using smaller quantities more frequently. This is due to the fact that lime gradually dissolves out of the soils and escapes into springs and streams. In the case of light, dry, sandy soils, the range of application would usually be from one thousand pounds to one and a half tons per acre, according to apparent need. On heavier soils, from one to three tons per acre is the usual range. Upon moderately heavy land, from one to two tons of lime per acre once during a rotation covering five to seven years, will accomplish all that is to be desired.

The limus test, or testing with ammonia, will show whether the soil needs lime or not. Or, as beets are greatly benefited by liming where grown in soil which really needs such treatment, two plots of beets may be raised, one limed and the other unlimed, and the results will quickly indicate the condition of the soil.

The form of lime to apply to the soil depends upon the market price, but, as a rule, where the material must be carted long distances, or where the freight charges are considerable, quick lime is likely to be the cheapest form to use.

The Potato Rot.

From the many complaints received and a personal inspection of several potato fields in the state, it is evident that the potato rot is prevalent this season, says a recent bulletin of the New Jersey Experiment Station. This disease is caused by a fungus (*Phytophthora infestans*) which is closely related to the downy mildew upon the grape. It first attacks the potato leaves, causing them to curl and become "frosty" upon the under side, after which they quickly turn brown and decay. From the leaves the fine threads of the fungus pass to the stems, and if the conditions are favorable the vines are soon dead and leafless. The potatoes are the last to be attacked, and owing to their size and solidity, may be considerably infested internally with the fine filaments of the fungus before the condition familiarly known as the rot becomes evident. From this it follows that the loss from the decay of the tubers after harvesting the crop may possibly be more than that occurring in the field.

Conditions Favoring the Rot.—The first essential is abundant moisture. Since 1840, when it is thought that the trouble was introduced into this country from South America, the wet years have been the seasons of most rot. A moist atmosphere favors the development of the fungus in the leaves and stems; the rains assist in conveying the germs (spores) from the foliage to the

tubers, and the wet soil encourages the growth of the filaments that may have reached the potatoes by descending through the stems. A second favoring condition is warm weather—not hot or cold, but a condition of the atmosphere which obtains when there is a week or month of showery summer weather, often spoken of as "close" or "muggy"—just such weather, in fact, as we have experienced throughout the state for the past four weeks. A large quantity of decaying organic matter, as coarse barnyard manure, perhaps, stimulates the development of the rot, especially if accompanied by favorable conditions of temperature and moisture.

Treatment of Infested Fields.—It is evident that after the vines have been killed there can be no further growth of the tubers, as the disease first attacks the leaves and tips of the vines and works downward toward, and finally into, the tubers, it follows that there can be no loss in yield, and a great possible gain in healthfulness by early digging. As a rule, the potatoes should be removed from the soil as soon as possible after the vines have been "struck" by the rot. The dead vines abound in the spores of the disease and it is possible for the tubers to be infected by contact with the vines at time of digging. Therefore, it is an important and inexpensive precaution to rake the vines into heaps and burn them before the potatoes are dug, at the same time destroying millions of germs of the rot, some of which might otherwise do injury elsewhere.

The same conditions favor the rot after as before digging, and, therefore, the dug tubers should be left to dry thoroughly, then the sound ones may be stored where they can be kept dry, cool, and with a good circulation of fresh air. A damp, warm, close cellar favors the growth of the rot. Air-slacked lime, a handful or so per bushel, may be dusted over the freshly harvested potatoes to destroy any adhering germs.

Preventive Measures.—The conditions which favor the rot are not under human control; but knowing the habits of the pest and that it does not usually make its appearance until midsummer, it follows that early varieties of potatoes, when planted early, will usually mature before the rot appears and thus escape. It is also to be borne in mind that a loose, light soil does not promote the decay like a clayey one in which the water is held and the air entrapped with difficulty. From the nature of the disease, it is not expected that any one would think of attempting a second crop upon an infected field until some years have elapsed. Probably much of the trouble arises from the seed not being free from the disease. It is possible, the potatoes for planting should be obtained from a locality where rot has not prevailed. The tubers for seed may be soaked in a solution of corrosive sublimate before planting. Some recommend placing the "seed" in an oven for a few moments, heated to near a hundred degrees. It is possible, plant upon a naturally dry or well-drained soil, and hill up the earth well around the vines at the last plowing, thus giving a good covering to the potatoes and making it less easy for the germs to reach the tubers through the soil. Experimentation may determine that some mixture can be applied to the young vines that will prevent the loss of foliage, and thus save perhaps a half or more of the crop that would otherwise either fail to develop or be lost by the rot. Until then, preventive measures are the only ones to be taken.

The history of the growth and development of this industry is very interesting. When the attempt was first made to produce sugar from beets in France under Napoleon I., the best beets produced only four or five per cent of sugar; by careful selection and breeding of the beets for this purpose the yield of sugar has been more than doubled, and it is now common to obtain eight or ten per cent of sugar from the improved beets.

The large amount of capital and the skilled labor and good management required at the factory, which finds full employment only for about three months in the autumn and early winter, are among the difficulties in this business. That they are not insuperable difficulties is proved by the statistics which show that for several years about five-eighths of all the sugar consumed

How to Grow Mushrooms.

A detailed account of mushroom culture is given in Farmers' Bulletin No. 53, issued by the United States Department of Agriculture, and written by W. Falconer. As stated in the introduction to this bulletin, the mushroom in commerce is practically the fruit of the mushroom plant, and not the plant itself. The plant itself is a white or bluish-white mold, called mycelium or spawn, that grows in fields or manure piles. In its younger stage, it is a network of white threads, and it is from the joints in these threads that the mushrooms grow. Mushrooms are a winter crop, requiring attention from September to April or May. The work of preparing the manure begins in September and ends in February, while gathering the crop begins in October or November and ends in May. Under proper conditions, however, a crop may be obtained all summer.

The spores of the mushroom, equivalent to seed, consist of a dark powder, diffused from the gills. Mushrooms, however, are not raised from spores, but propagated by division of the mycelium or spawn. All the spawn in general use is imported, and comes in two forms, English brick and French flake. The English spawn is put up in bricks of dry dust manure. These are broken in from twelve to fifteen pieces for planting. The French spawn is in flakes of strawy manure, which are broken into pieces two or three inches square, and planted like the brick spawn. Brick spawn costs about 10 to 12 cents a pound in small lots; flake spawn 35 to 40 cents. About \$20,000 pounds of brick spawn are now annually imported, while six years ago the importation only amounted to 64,000 pounds.

Mushrooms can be grown almost anywhere out of doors or indoors, where there is a dry bottom on which to set the beds, where a uniform and moderate temperature can be maintained, and where the beds can be protected from wet overheat, and from wind, drought, and direct sunshine. Among the most desirable places are barns, cellars, closed tunnels, sheds, pits, greenhouses, and regular mushroom houses. Total darkness is not imperative, for mushrooms will grow well in the light if shaded from hot sun. The chief reason for growing mushrooms in dark places is that the temperature and moisture are more likely to be equable than in the light.

A cellar is an excellent place to grow mushrooms. The windows and doors should be closed up, and if only a part of the cellar be devoted to the beds, this should be partitioned off with boards, or the beds either covered with mats or board up. If the cellar is not heated, beds fourteen inches deep should be built on the floor only. If heated, in addition to the beds on the floor, shelf beds, eight to ten inches deep, may be used. A cave or tunnel is practically the same as a cellar, except that these are seldom artificially heated. In such places, the beds are rarely built on raised shelves. A mushroom shed, built entirely above ground or partly sunken, is a tight, warm structure, usually built of boards; another place for beds is under the boughs in a greenhouse.

The best material for mushroom beds is fresh horse manure. This should be thrown into a heap, wetted if at all dry, and allowed to heat. When it begins to steam it is turned, shaken up, and tramped solid again. If it gets very dry, it must be well wetted. This process of turning, shaking up, moistening, and tramping solid again is repeated until the heat does not rise above 130 degrees F., when it is ready to make into beds. It must never be allowed to "burn"; one-fourth its bulk of loam is sometimes added at the second or third turning, to prevent the liability of this.

If the beds are made on the floor, the latter should be dry. The beds are usually from eight to fourteen inches deep, either made entirely of the prepared manure, or one-half the depth of fresh, hot manure, tramped down firmly, with the prepared manure on top. The whole bed must be packed very firmly. A little hay or straw is placed over the surface, to arrest steam, and is then left until the temperature has fallen below 100 degrees, 90 degrees being considered the best temperature for spawning. The spawn, broken into pieces, is then planted in rows about one foot apart, the pieces nine inches apart in the rows. The spawn is inserted two or three inches and firmly covered. The surface of the bed is then covered with straw or mats, and left for eight or nine days, when the mulch is removed, and a covering of fine loam, two inches deep, is put all over the bed. This gives the mushrooms a firm hold, and also improves their texture. An atmospheric temperature of 55 to 60 degrees is most favorable. If the atmosphere be dry, the walls and paths are sprinkled with water.

The diseases of mushrooms are, fogging off, flock, and black spot. Fogging off is softening, wilting, and dying off of young mushrooms; the cause is unknown. In such case, the affected mushrooms should be rubbed out, and the spot top-dressed with loam, with a pinch of saltpeter in it. Flock is a white mold running over the gills, weld-

ing them into a mass. No remedy is known. Black spot shows on the top of the cap, and is caused by a host of minute cel-worms. Among insects attacking mushrooms, maggots are the worst, and their presence makes it impossible to grow mushrooms in summer, except in caves, to which the flies cannot obtain access. Slugs and sow-bugs attack mushrooms, but they may be controlled by trapping.

Fish Farming.

It has often been said that an acre of water devoted to fish culture would bring much larger returns than if devoted to general farming. Mr. Lyons of Kansas has been raising fish and has ponds devoted to them, as well as furnishing ice for winter. Many of the fish live on crawfish and other natural food about the ponds. But that is not sufficient to satisfy the vast number there now. Mr. Lyons feeds them corn. He grinds it by steam power and then steams the meal. Five bushels of the ground steamed corn is a feed for each of the two principal ponds. On it the fish thrive, and there are now many there that will weigh as much as thirty or thirty-five pounds. Mr. Lyons watches them as one would a herd of cattle, as careful about them as the most particular stockman, has studied their nature and knows what to do with them under varying circumstances. He works with them day or night, whenever they need attention. A careful estimate of the supply there now, made by the experienced men, put it at fifty tons, making them worth close to \$10,000. The work on the ponds and dams has made them worth an easy \$5000, making a valuable plant of it. The income from the fish would pay a very large rate of interest on \$5000 for years to come.—Colman's Rural World.

We should be glad to know what kind of fish are here described.—Ed.

Picking Apples.

Mr. H. P. Vergon of Delaware Co., O., gives some very practical hints in a recent number of the Ohio Farmer on the subject of harvesting apples, from which we take the following extracts:

Too much can hardly be said in favor of basswood for ladders, as it is strong and light, does not crack or splinter on the corners of the side-pieces, and wears smooth. Have your blacksmith take iron one-eighth of an inch thick, one and one-fourth inches wide, and sixteen inches long; bend it into a V shape with two holes for screws on each side. Dress the bottoms of the side-pieces of the ladders to fit, and put them on. It is inexpensive, and the advantages are so great I would hardly know how to get along without it. First, in setting up the ladder, take hold of it by the rounds with each hand a little below the center; then with the right hand lift the top of the ladder as high as you can, and with the left hand hold the bottom near the ground; give it a little yank or chuck endwise to the ground, and it has a foothold and you walk right up with it, and the bottom doesn't kick up and let the top end down over you as often happens in raising long ladders unless you call some one to hold the foot. Our twenty-five foot ladders are handled in this way by one man.

In the next place the ladder never slips at the bottom, even if the ground is irregular or sloping. It usually adjusts itself; but by putting your foot on the first round and bearing down, and if the ground is very hard lift the ladder a foot or so and drop it, and you are all right. Furthermore, with this footbold, if the bearing of the ladder against the branches of the tree is not even, it cannot turn over nor tip up.

My ladders are twelve, sixteen, twenty-one and twenty-five feet long, four of each length; the stringers or sides of the best clearbase wood, and the rounds from white-oak butts grown in the timber eighteen inches to two feet in diameter. A fine grain or growth is better than coarse second growth. The separating is done while the milk is being on, and ten to fifteen minutes after the last cow is milked the calves and pigs have had the new, warm, sweet skim-milk. The saving by the use of the separator on this farm has been already a great many times more than the cost of the outfit.

hold the stringers snug to their places, and a light, flat finishing nail driven through the stringers at each round, just long enough to fairly reach into it a half inch by sinking it a little with a punch. Now, round the corners of the stringers to about a half-circle, and give the ladder a thorough sandpapering; put on the V-shaped irons at the bottom, and the ladder is ready for painting, which should be thoroughly done with the best paint.

This ladder business may be a little tedious; but there is not one in a thousand that knows how to make a ladder just right, and I do not believe that three pounds of material could be neither added to or taken off from any of the ladders described without being a disadvantage.

The next thing in the outfit is the stool; this is the thing to pick apples with. This is a three-legged affair the top being made of bass wood four feet long, fifteen inches wide, one and three-eighths inches thick, the corners are reinforced with cleats through which holes are bored for the three legs, one of which being near the middle of one end of the top rises two feet above it with a curved end at the top, being made of an old buggy shaft; this curved end has a hook for holding the basket; the legs are well braced, and the top of the stool is three feet high. Standing on this a man can rapidly pick all fruit within nine feet of the ground without a ladder.

I have a young orchard of twelve hundred trees, eight years old last spring, from which the fruit was picked almost entirely with these stools, very rapidly and without any danger of mauling the branches.

Making and Preserving Grape Juice in Bottles.

I notice a request for instructions in detail for expressing and preserving unfermented grape juice in bottles by some person who has had actual personal experience in the process, and as I have been doing more or less of it every year for over fifteen years, for my family use, and in evidence of my success in the simple process can show sample bottles of that age and of later bottling, that we test one of occasionally, and find them "fit for men or gods."

Too much can hardly be said in favor of basswood for ladders, as it is strong and light, does not crack or splinter on the corners of the side-pieces, and wears smooth. Have your blacksmith take iron one-eighth of an inch thick, one and one-fourth inches wide, and sixteen inches long; bend it into a V shape with two holes for screws on each side. Dress the bottoms of the side-pieces of the ladders to fit, and put them on. It is inexpensive, and the advantages are so great I would hardly know how to get along without it. First, in setting up the ladder, take hold of it by the rounds with each hand a little below the center; then with the right hand lift the top of the ladder as high as you can, and with the left hand hold the bottom near the ground; give it a little yank or chuck endwise to the ground, and it has a foothold and you walk right up with it, and the bottom doesn't kick up and let the top end down over you as often happens in raising long ladders unless you call some one to hold the foot. Our twenty-five foot ladders are handled in this way by one man.

In the next place the ladder never slips at the bottom, even if the ground is irregular or sloping. It usually adjusts itself; but by putting your foot on the first round and bearing down, and if the ground is very hard lift the ladder a foot or so and drop it, and you are all right. Furthermore, with this footbold, if the bearing of the ladder against the branches of the tree is not even, it cannot turn over nor tip up.

My ladders are twelve, sixteen, twenty-one and twenty-five feet long, four of each length; the stringers or sides of the best clearbase wood, and the rounds from white-oak butts grown in the timber eighteen inches to two feet in diameter. A fine grain or growth is better than coarse second growth. The separating is done while the milk is being on, and ten to fifteen minutes after the last cow is milked the calves and pigs have had the new, warm, sweet skim-milk. The saving by the use of the separator on this farm has been already a great many times more than the cost of the outfit.

Growing Mutton.

At an institute held in Columbus, O., Mr. H. P. Miller spoke on the above subject as follows:

There is a limited period in the life of animals for growth. Every factor in the problem of producing mutton, points toward an earlier marketing. To par-

phrase a familiar expression, it is the early lamb that gets the prize. An eight weeks old lamb, if in condition and in "season," commands the highest price per pound ever attainable. A very narrow limit of time at this period and the height of the tide in prices passes. A lamb not meeting the requirements of the market at that period must pass on to a cheaper class, not to find sale until another "season" opens which calls for a lamb three to five months old, but at a less price per pound.

The lambs sold at four months of age do not, as a rule, bring as much as those sold at two months old. If, again, the age is doubled or trebled, the market into which they must go, is such that in spite of their gain in size they will bring

to each stick of cement, which renders it more adhesive; it should then be well stirred and applied quite hot. I experience no difficulty in the juice keeping with the bottles in any position, but if upright if any sediment has precipitated the juice will pour off clear of the sediment. I keep the bottles in my cellar, which is clean, dry and frost proof. Seldom indeed that a bottle bursts, and then only by defective sealing. I do not put hot juice in the bottles nor bottles in hot water; have never used a thermometer to test the temperature of the water, but had I one would not let the water exceed a temperature of 190 to 200 degrees Fahrenheit, as water boils at 212 degrees. The same treatment applies to apple juice or cider. Green's Fruit Grower.

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POULTRY.

Poultry Raising.

In the latitude of Massachusetts, the poultry raiser who employs artificial methods, independent of the whimsical old hen, and who intends to capture every dollar that can be made in the business, and who desires a month or two respite from his more arduous labors, cannot do better than select July and August as the two best months in which to omit hatching. Not because chickens hatched in mid-summer will not thrive, whether in properly constructed brooders located in shady places or with hens that are prevented from roaming with their broods in the boiling sun, for that idea has long been exploded, but simply to partially relieve himself of the care of incubators and newly hatched chickens, and thus lighten his task when it will least affect his income, for the hatchings of July and August are perhaps the least profitable of any in the entire year. Such a poultryman, however, should start his incubators again by August 10th, to have his fall hatchings commence September 1st, because chickens then hatched will grow faster than at any other season of the year, and we have had them average over a pound each, in lots, at five weeks old. This is not surprising when we consider the favorable conditions which then exist. The fierce heat of mid-summer is passed, the days are seldom excessively hot, the mornings and evenings are cool, and the nights are comfortable. Every seed-bearing plant has gone to seed, enabling lively and level headed chickens to almost obtain their own living, and the very best kind of a living at that, and well rewarding them for foraging and scratching to their heart's content. These combined conditions render the mortality rate very low, and in fact almost nothing, and encourage the more experienced poultry raisers who take a brief breathing spell in July and August, to resume their hatchings as soon after September 1st as possible.

If you adopt the plan of converting the most of your eggs into chickens, you will of course then continue your hatching uninterruptedly, and particularly enjoy the rapid growth of chickens during the pleasant fall months, and again in the early spring, but if you are not situated to avail yourself of this advantage, and especially if you prosecute your business by hen power, you cannot better employ a portion of your leisure time at this season of the year than by studying the incubator and brooder problem and preparing yourself for something later. This subject will bear very close investigation. We were once precisely thus situated ourselves, and (to borrow a phrase from the classics) the way we investigated artificial poultry culture was a caution. We now vividly recall many old timers in the poultry business, now inhabiting the New Jerusalem, and whose entrance there we may have unintentionally hastened, to whom we must have been holy terrors, and they doubtless dreaded our frequent approach and our interminable questions, as they would have dreaded the approach of a roaring lion or the pestilence that walked in darkness and the destruction that wasted at noonday, but the knowledge ultimately gained by us was well worth the price. You will find much advantage in visiting successful poultry establishments and seeing incubators and brooders in actual operation, and in comparing the different makes and systems, including cost, labor involved, and especially the results in talking with the proprietors, if they are practical men, obtaining their ideas resulting from their experience, which are the only ideas of any value whatever. You may be led to change your mind on some points and to adopt better methods and more continual hatchings. After obtaining all information to be had from books and practical poultrymen, it must be your own experience that counts for much.

Not every one, however, clearly sees the importance of actual experience in any undertaking, or fully realizes that it is absolutely indispensable to hawking success in poultry culture. We were recently approached by a gentleman of more than ordinary intelligence and culture, in fact "graced with polished manners and fine sense," but who was smitten with a love of country life, and applied for a position to operate and manage our incubators and brooders in case of a vacancy. Have you had any experience in this direction, we inquired. No, he replied, but I have a thorough knowledge of the theory. Incubators, I know, should be kept at a uniform temperature of 102 or 103, and moisture should be thus and so, which is simple enough, and brooders I am told should be kept so and so, according to the weather, the age of the chickens, &c. This, too, is very simple, so that by giving the matter my entire careful attention, I could not fail of success.

My dear sir, we replied, you are strangely deluded, and with your best efforts, you would at first be almost certain to make a failure. True, you

might happen to have a good hatch, but it might be followed by half a dozen partial or total failures, and it is almost morally certain that your first struggles with brooders would result in a death rate of from 50 to 100 per cent and the chickens that did manage to pull through and make a live of it, would have crooked toes or twisted legs, would sit on their haunches or walk on their elbows, or travel backward easier than forward, with what few feathers they had, pointing towards their ears, or else peradventure be as destitute of feathers as a bullfrog and as bare as the back of your hand. You discourage me, he replied. Not the slightest occasion for discouragement, we continued. Suppose you attempt to start for the first time, and hardly on your feet before you are standing on your head, having meantime seen nearly every star in the firmament; or you venture to mount a bike and no sooner reach the saddle than you are waltzing on your ear and have sprained your left eyebrow, but by a little perseverance, you can soon cut a pigeon's wing on the ice, or scorch over the boulevard with the best of them or rather, we should say, with the worst of them. Precisely so with incubators and brooders or, in fact, with anything else. Begin small and let your losses be small, and learn your lesson gradually, for we all had to creep before we could walk, and this is in accordance with the immutable law of nature. We look at Mr. Rankin, for instance, today, and congratulate him upon his brilliant success, but it was not made at one bound, and we all know that at his first attempt he did not sail smoothly along with his ten thousand ducks and chickens per annum as today and his present handsome profits. On the contrary he struggled hard and labored indefatigably year after year, through the cold and snow of many a winter, and the heat of many a summer and amid failures and disasters which would have discouraged almost any other man, before solving the problem which he made clear and gave to the world, and which has so signally changed the entire aspect of poultry culture, and by no means the least important lesson he has taught us, that perseverance is essential to success.

The idea we started to convey was that if this particular month is comparatively a leisure one with us, and if we are between two busy seasons, or between hay and grass, so to speak, we could not employ the time to better advantage than by looking about us, as opportunity may present, among the larger and most successful poultry raisers, and see if they have any ideas or methods that we can profitably adopt and so, to make any slight necessary preparation now, and have it in readiness, instead of waiting until we want to use it, and then perhaps be obliged to go without it. Particularly is this desirable with the brooder system, now so frequently used by those who still hatch with hens, and cannot afford to purchase an incubator, but who desire to rear the largest possible number of chickens in the cheapest and at the same time, in the best manner. Many persons in this way avail themselves of considerable winter hatching, depending of course upon the caprices of the hens, but nevertheless adding quite a respectable sum to their income, and in fact thus hastening the time when they can purchase an incubator and keep pace and compete with their more advanced and fortunate neighbors.—W. H. Radcliff, in Poultry Keeper.

Co-operative Experiments.

There is in the Province of Ontario, Canada, an organization of farmers which, under the guidance of Director Zavitz of the Ontario Experiment Station, is carrying on the most extensive experiments ever made in agriculture. According to Prof. Zavitz' recent report there are at present 2835 farmers who are co-operating with the Experiment Station in making tests. These are partly graduates of the Ontario Agricultural College and partly enterprising farmers who have undertaken to help solve the problems which confront their brethren. The result of the work is already apparent. Thousands of farmers have observed the many experiment plots and fields in various parts of the province and profited thereby. The results obtained are regarded with more confidence than those from the necessarily limited plots of experiment stations, which it is often charged do not hold good in ordinary field culture. Similar work has been done in Connecticut with very satisfactory results. The plan is a good one and worthy of being more widely adopted.

The profit of keeping sheep is not to be estimated entirely by comparing the price of the fleece and meat they produce with the cost of keeping them. The improved condition of the farm must also be taken into consideration. The advantages of keeping sheep may not be shown in one year, or in four or five years. The profit in the business must be determined by comparing the condition of the farms on which sheep have been kept for many years with that of other places where they have not been kept.—Exchange.

Upon opening a hive, the absence of the brood is a sure sign of either a virgin queen or no queen at all, at any time during the summer months, and in

APIARY.

Preparing Bees For Winter.

I infer this information is for our farmer friends. The experienced bee-keeper already has his own pet methods. It seems to be generally acknowledged that out-door wintering on the summer stands requires the least time, money and skill, and is therefore especially adapted to the needs of the farmer bee-keeper. We belong to that class and suffer no loss from wintering.

This is our method: We commence sufficiently early to have our bees packed by the first week in October. First, examine your hives and see that your colonies have good queens; should you find one queenless, write it with one of your weaker colonies that has a good queen. This may be done by placing the former over the latter, putting a sheet of heavy wrapping paper, size of hive, between the two, cutting a hole just large enough to allow the passage of one bee at a time. They will unite slowly, avoiding a battle in which many valuable bees might be lost.

Now take from each hive two or more frames—enough to give room for a chaff division board on each side of the frames next to the walls of the hive. Weigh an average frame in order to ascertain the quantity of stores. If less than twenty-five pounds, feed honey or a syrup, made from the best granulated sugar—one part water to three of sugar giving to each colony enough to bring its stores up to the required standard. We use the ordinary box bee-feeder, set on top of the frames at sun down. Put on top, across the frames, sticks, or much better, what is known among bee-keepers as Hill's Device. Over this place a cover of some loose woven cloth. The common burlap, which may be obtained at any furniture store, is cheap and satisfactory. Now put on a cushion a little larger than the hive. This cushion is made of the same material as the cover, and filled with oat or wheat chaff. Tuck down the edges that there may be no exposed place; put on the hive cover, observing that it has one or two air passages, covered over with fine screen wire, and the work is done. Leave the entrance open full width.

If your bees are in an exposed place some kind of wind break at the back of the hive will be good. Last winter we utilized a pile of loose brick, by building a wall of them against the back of each hive as high as the brood chamber, and banking up earth against it. Early in spring when we first looked into the hives we found them so well supplied with bees and brood that we had nothing to do but let them take care of themselves, though our neighbors lost all their bees.

It is taken for granted that readers of progressive papers use the movable frame hive. In the language of the old German apiarist, from whom we purchased our first colony, and who gave us our first instruction in bee-keeping:

"The old box hive is gone with the time when the farmer raised and fattened his hogs in the woods."—Mary Martin Durbin, in Indiana Farmer.

THE CLOSE OF THE HONEY HARVEST.

There is no time more important to know the condition of every hive of bees just at the close of the honey harvest. If the season has been a good one, and much swarming has been allowed, many things will usually be found out of gear which, if not attended to promptly, may cause considerable loss and trouble. The first thing to be looked after is the queens, and right here is the greatest trouble with those who do not have "good luck" with bees; they simply do not keep them in proper condition and in fact know nothing about what is going on inside of the hive. It is a very small apiary that some colony will not be found queenless after the honey season, and even one is enough to cause not only its loss but endanger a dozen more.

Robbing always follows queenlessness, and the one is as sure to occur as the other. Perhaps fifty per cent of all virgin queens become lost after the surplus is disposed of and after settling down to housekeeping. A colony of bees containing a young or virgin queen has nothing to depend upon but the queen herself, as they have no brood from which to raise another, and if anything happens to the queen, and she takes several perilous trips before she is a laying queen, they are surely lost unless the deficiency is supplied by their keeper. Hence one of the greatest losses of bees occurs from this cause, and the careless beekeeper cannot account for it, but lays it to "bad luck."

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See our Special Offer on the sixth page.



Quick Milking.

The two main points in milking are gentleness and quickness; indeed of the two, quickness is the chief, for a quick milker can seldom be a bad one. Where milking is done by piece work, and the tough cows are eliminated, it is customary for one person to do ten in an hour; a little longer time being required when all come together in full yield in the beginning of summer. Where it is not done by piecework, and the cows are of all sorts, it may take half an hour longer; but the more quickly it is done, the more will the milk yielding power of the animals be stimulated. If the milk is frothed in the pail, it may be taken for granted that the speed is all right, however; but if it is not frothed, then the milker is doing an injury to the cows, and it kept to the one lot would put them prematurely dry. But the quality of the milk, as well as the quantity, is influenced by the milking of the cows and the manner thereof. Dr. Babcock found, in some experiments he tried regarding this matter, that slow milking had a very decided effect in reducing the butter fat in the milk, there being an average decline of over eleven per cent in his trials as a result of slow milking, while there was also a decided diminution in the quantity; though in a prolonged trial with cows naturally going dry, the differences tended to disappear. The total result over a season, however, is beneficial to the milk yield in the case of quick milking, not to speak of the saving of time.—Hoard's Dairyman.

most cases from early spring until late autumn. But in some cases pretty soon after the honey season has closed, some old queens will cease laying entirely, but very seldom, and even then as those are better superseded, as they are past their usefulness. At any rate we are safe to conclude there is something wrong, and make a search for the queen. If no queen can be found, we make a thorough test by inserting a frame of young brood from another hive, and if they have no queen they will start queen cells on the brood inserted, which is conclusive evidence of no queen. It may seem quite a job to hunt out a queen to those who are not acquainted with the interior of a bee hive, but a little experience will enable any one to find a queen in any hive from one to three minutes.—A. H. Duff in the Western Rural.

Gasoline Engines on the Farm.

For a good many years I was unable to decide what was the best farm power or what was most convenient and economical to operate such machinery as we needed on the farm. I have tried in turn tread and sweep powers, steam engines and lastly a gasoline engine. Two years since I purchased a six-engine power gasoline engine, and can now say that it fills the bill exactly—just what every farmer should have who shreds his fodder and grinds feed in sufficient amount to justify the outlay of money on a good power. During the year I shred from forty to sixty acres of corn fodder, cut oats, ground feed and a few tons of bone meal for myself, and do a good deal of grinding for neighbors. With a convenient power I find that I use it much oftener than I did powers that took considerable time to get them ready for business.

I cannot imagine anything more convenient than a gasoline engine for use on the farm, unless it would be a permanent motion. At any time, day or night, hot or cold, I can go into the barn, and without so much as even striking a match, have my engine running at full speed in two or three minutes. Oil it up and start it, and you need not go near it again for half a day, and only then to oil or refill the gasoline tank. It gives a strong, steady power and is very easy to operate. I have not been out a cent for repairs in the two years that I have been running my engine. It occupies but little space on the barn floor, and there is no danger of firing the hay or straw, or any litter that may accumulate around the engine. And it is a great satisfaction to know also that when you are operating it there is no danger of explosion, and you are not going to get hurt if you keep out of the machinery. And as to cost of running, this item does not foot up very much, as no engineer is needed, and the cost of fuel, or gasoline, is only fifty or seventy-five cents a day, according to the amount of power necessary to speed up the machinery you have in operation. We have been asked quite frequently how large a farm must be to justify the expenditure of money for an engine. It does not have to be very large. A two-horse power engine would do for a small farm, and this would cost less than \$150. The interest on this investment would be \$9 a year, so you see that a very small farmer could find enough to do in grinding and cutting feed to soon overcome this amount. I would always have an engine on trucks so that it might be easily shifted about the barn or to different parts of the farm.

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MASSACHUSETTS PLOUGHMAN
NEW ENGLAND AND JOURNAL OF AGRICULTURE

BOSTON, SEPTEMBER 18, 1897.

Persons desiring a change in the address of their paper must state where the paper has been sent as well as the new direction.

KENT COUNTY, ENGLAND, the home of the Romney Marsh, or Kent sheep, averages 920 sheep to every 1000 acres.

HAVE you had your vacation? Take one while you have health and strength to enjoy it. It need not be expensive.

KANSAS farmers are happy with a big wheat crop and are paying off their mortgages rapidly. We heartily congratulate them.

THE UNITED STATES has not many over 50 sheep for every hundred of population, while Australia has 3000 to every hundred of population.

It is said that Wm. Freeman, of Little River, Fla., raised 633 crates of tomatoes this year on less than an acre of land, for which he received over \$1200 net.

THE hot weather of the past week is just what the corn crop needs. There is a prospect that most of it will ripen well after all. Reports from Kansas complain of lack of rain.

THE ROLLING STOCK of the great railways is insufficient to meet the demands of business. An order was given last week to the Pullman Co. for 1000 freight cars costing nearly \$1,000,000.

SHEEP breeders all over the country are taking courage and making plans to increase their docks. This is encouraging, for sheep husbandry has never taken the important place it deserves in this country.

A NEW weekly has appeared in the newspaper ranks under the name of the Saturday Observer, of Worcester. The first issue appears bright and new and is clean and attractive in appearance. We wish it success.

WHEN CORN is worth thirty-four cents per bushel, it costs four cents per pound to make pork. At the present relative price of corn and hogs, there is a good margin of profit for the hog raiser, and the margin seems to be growing larger from week to week.

ACCORDING to the Cincinnati Price Current, the number of hogs slaughtered in the West last week was 290,000, as compared with 285,000 the previous week. From March 1 up to last week the number slaughtered was 9,005,000, as compared with 7,495,000 for the same time last year.

THE HILLS and mountains of New England as well as the arable fields may carry profitably a large number of sheep without interfering at all with the number of cattle kept. Sheep feed on herbage that cattle will not touch, and a few of them in every cattle pasture are a help rather than a hindrance.

POTATO vines that have been blighted should be burned in order to kill the spores of the disease which otherwise might injure the next year's crop. Where the vines have blighted, dig the crop at once, and, if not marketed at once, spread it on the barn floor to dry; after a few days sprinkle with air slacked lime and store in shallow bins.

THE protracted war in Cuba, together with the new duty on imported sugar, combine to raise the price of this necessary commodity and give a stimulus to the industry of growing beet sugar in this country. When once this industry shall be established it is likely that it will hold its own against foreign competition, in spite of the bounties paid by the European governments on sugar exported to foreign countries. There is no good reason why we should continue to import nearly all of the two hundred million dollars' worth of sugar which we consume; our soil, climate and ingenuity are competent to produce all we need, and probably the near future will see it done.

WE are glad to note that such an ideal "farmers' candidate" is in the field for the senatorial nomination in the fourth Worcester district as George L. Clemence of Southbridge. He represents the best element of the farming population and has shown himself to be both progressive and business-like in his chosen calling. His specialty has been dairy farming, and he has proved himself a leader in the application of the best of the new methods to this branch of farming. His silo was the third one built in this state and his dairy barn has proved a model for many large dairy farms, that at the Agricultural College being a duplicate of that of Mr. Clemence on an enlarged scale. Mr. Clemence is well known as a speaker on agricultural subjects, and has been heard at the Ploughman Farmers' Meetings. He has held several public offices in the past and if he is chosen to represent his district in the State Senate, there is no doubt but that he will do so worthily.

STATE OF OHIO, CITY OF TOLEDO, ss.
LUCAS COUNTY.
FRANK J. CHENEY, doth swear that he is an
enior partner of the firm of F. J. CHENEY &
Co., doing business in the City of Toledo, County
and State aforesaid, and that said firm will
pay the sum of ONE HUNDRED DOLLARS
for each and every one of the books that can
be cured by the use of H. L. L. CATHARH
CURE. FRANK J. CHENEY.

Swear to before me and subscribed in my
presence, this 6th day of December, A.D. 1896.
A. W. GLEASON,
Notary Public.

Hall's Catharh Cure is taken internally and acts
directly on the blood and mucous surfaces of the
system. Send for testimonials, free.

F. J. CHENEY & Co., Toledo, O.
Sold by Druggists, 75c.

CURRENT TOPICS.

It seems a pity that the coal miners' strike, which has been so long continued without any tragic features, and which seemed on the point of being settled in a peaceful manner without bloodshed or violence, should have at last resulted in the tragedy at Latimer, Pa. As near as can be gathered from the conflicting testimony, it would appear that a large body of paraders, made up almost entirely of foreigners, unacquainted with the English language, were met by Sheriff Martin and deputy deputies, who proceeded to read the riot act to them. Being foreigners, they could not understand, and showed signs of resistance. Some one struck the sheriff, and an order was immediately given to fire upon the strikers, with the result that twenty-two of the miners were killed, fifteen fatally wounded and forty more injured. Many were shot in the back, in their attempt to escape. According to the opinion of the miners, the shooting was wholly unnecessary and the whole affair appears to be the result of a fatal blunder, but the sheriff and his deputies claim there was no other way possible. It is feared that more trouble will follow and troops are on the ground to prevent any demonstrations. The convention at Columbus, Ohio rejected the sixty-five cent proposition by a very close vote.

Of recent events in Europe the official announcement of the "alliance" between Russia and France, on the occasion of the visit of President Faure at the Russian capital, has no doubt been the most sensational, says Harper's Weekly. But it may well be questioned whether this event has really changed the relations between the great powers of the Old World sufficiently to justify the sensation it caused at the first moment. A "friendly understanding" between France and Russia has existed for many years. To be sure, an alliance means much more than a mere friendly understanding. It involves a more or less clear definition of the points the understanding is about, and the assumption by each party concerned of certain definite obligations toward the other, binding it to act thus and so in certain emergencies. A mere friendly understanding may be changed or abandoned, as one party or the other may change its views as to its immediate or remote interests, without any breach of obligations. By a formal alliance the friendly understanding receives the character of a matter of honor, and thus a much stronger warrant of good faith and durability. But as to its objects the alliance need not go farther than the more informal friendly understanding did, and it is eminently probable that it does not go farther in the present instance.

TO FRANCE the open demonstration of intimate friendship with Russia has had a peculiar importance ever since her defeat in the Franco-German war. The French Republic found herself in a state of distressing isolation, partly on account of the issue of the war which stripped her of much of her prestige as a great power, and partly on account of her republican institutions, at which the monarchial governments around her looked askance. Backed by Russia she would be relieved of that isolation; her prestige as a great power would be heightened by the combination with another great power, and in the family of European states the republic would be received on an equal footing with the monarchies.

It is not the growers of wheat and corn who are alone to benefit by the rising prices and extended foreign markets. Large as is the number of farmers raising grain for export, there is still another item of foreign demand that will continue the spread of better conditions throughout the United States. Since 1877 the largest export of wheat and wheat flour in any one year occurred in 1892, when 225,660,000 bushels were sent out of the country, and the value represented by the outward movement of all breadstuffs was that year \$299,363,117, the only instance where the value of this class of exports has exceeded the value of the exports of raw cotton, says Harper's Weekly.

ON THESE two items our command over European markets depends, for they contribute nearly two-fifths of the total value of all exports, and it is on them that the ability to draw gold from abroad depends. The rise in the price of grain has attracted wide notice, and has naturally led to much speculation upon a continuance of the foreign demand at comparatively high prices. That the export will continue until the new crops are gathered is reasonably certain, and then the full cotton movement will be in swing.

THE RISING TIDE of the past summer will be held by the movement in the coming winter. The grain farmers are now having their day, and the cotton-growers are just beginning to realize their possibilities in the same line. The West and middle West have reaped their profits, and the effect has been sensible in every branch of industry. Now the South will come in for its share, and thus the activity of manufacturers will have a basis to rest upon and to increase.

ALL THIS is due to a remarkable combination of conditions. Such an occurrence as a general famine seems to be beyond the reach of possibility, so many are the kinds of food, grown under all descriptions of circumstances and geographical position. Famine will be more or less local affairs, pressing with terrible force upon a district, or even a single country, but affecting only indirectly all outside of its immediate sphere. The year 1897 presents what is probably the nearest approach to famine the world will see, and in this respect favors all who have grain to sell. It so happens that the farmers of the United States alone are in this position, and they therefore control the supply and reap the benefit of the higher prices.

MRS. ELLA S. WILLIS has sold her residence in Sudbury Centre, consisting of nine acres of tillable land and old colonial buildings, to A. E. Hosmer, of New Haven, Conn., who will make extensive improvements.

ELIZABETH C. MCDONALD has sold to Charles King of Somerville a twelve-acre farm, with buildings, in Unionville, on the road to Woonsocket, R. I.

HOOD'S PILLS should be in every family medicine chest and every traveler's grip. They are invaluable when the stomach is upset, or when the bowels are sluggish, bilious, and all liver troubles. Mild and efficient. 25 cents.

No. Weymouth & Boston Express.

HERMES S. HEYWOOD,
PURCHASING AGENT,
21 Milk Street, BOSTON, MASS.

Estimates furnished on merchandise of every description. Telephone, 508 Boston.

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Read and Run.

—Canadians are buying fruit in Kansas. —Our exports were greatly increased in August.

—Dr. Parkhurst's health is reported to be restored.

—Port Huron, Mich., is to become an oil producer.

—New Orleans has no fear of the spread of fever there.

—Buffalo's gas interests have been sold for \$5,000,000.

—The price of coal will probably rise twenty-five cents Oct. 1.

—A party has left Edmonton to make a cattle trail to Klondike.

—New gold discoveries have been made on Sulphur Creek, Alaska.

—The western railways continue to show improved conditions.

—The last spike has been driven on the Port Arthur Gulf route.

—A Kansas City farmer is said to be heir to a Dutch prince's wealth.

—A new steel pier is to be built at Atlantic City, N. J., to cost \$300,000.

—Chicago's new Public Library Building has been opened to the public.

—Trains now use four tracks on part of Boston & Albany's depressed roadbed.

—A great copper vein has been reported as found in Ashland County, Wisconsin.

—All lines of business in New York have been enormously stimulated by good times.

—A Spokane party is going to the St. Louis River diggings overland via Ashcroft.

—Fifteen thousand acres of Alabama coal lands have been bought for development.

—Governor Wolcott has accepted the resignation of Insurance Commissioner Merrill.

—Daniel C. Brown has been held for trial on a charge of mail robbery at Marblehead.

—There is a report current that large paper mills are forming a combination to maintain prices.

—So much gold is accumulating in the treasury that it may have to be paid out in place of paper.

—Debs' followers in Chicago demand the life of a millionaire for every miner killed at Lattimer.

—Jacobs Wilson, a San Francisco tramp, is said to have inherited portion of a \$15,000,000 estate.

—The miners are leaving much of their Klondike holdings to return to America, fearing starvation.

—Mrs. E. Florence Barker, first national president of the Woman's Relief Corps, has died at Malden.

—The returns from the normal schools of the state show that the attendance will be largely increased.

—The question of admitting a street railway at Milton is to be settled by a special town meeting.

—The seventy-fifth anniversary of the adoption of the city charter of Boston was celebrated Thursday.

—Schooners D. M. Anthony and James L. Maloy call in Vineyard Sound; both boats were badly injured.

—A woman, claiming to be the widow of Allen Gregory of Chicago, has asked for a share of his \$1,000,000 estate.

—The government crop report shows nearly five points decline in corn, which is now below the average for ten years.

—The schooner Alvira J. French has arrived at Gloucester from Trapani, Italy, having been leaking ever since she left Gibraltar.

—Everett P. Willis pleaded "not guilty" in the Superior Criminal Court to an indictment of the Suffolk grand jury finding him probably guilty of an assault with intent to kill on Elisha S. Darling and James L. Abbott, officers of the State prison.

—It was the fortune of Theodore Lyman to end his prosperous and happy life in long and irksome disease, whose only chances were from bad to worse. It was then that the genuine character of our friend came out in the noblest form. His cheerful temper which might have seemed levity in youth was found to be the fortitude of the dying soldier, and the consolation of stricken friends. His best title to remembrance is neither his liberality nor his talents, but that unfailing endurance of the worst physical ills, and the generosity of soul with which he spared to others the suffering he could not avoid, but of which he would not complain.

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MARKETS.

BOSTON LIVE STOCK MARKET

Cattle at steady price — Sheep firm in tone and price — Hogs in demand — Western steady — Northern 18 Lower — Calves in good demand — Milk Cow supply large and prices a little weak — Horse Market quiet.

Reported for Mass. Ploughman.

Week ending Sept. 15, 1897.

Amount of Stock at Market.

Cattle. Sheep. Hogs. Veal.

This week. 5,301 12,207 133 2,007 1,748

Last week. 3,844 6,647 135 31,599 1,913

One year ago. 5,540 11,765 196 28,687 1,424

Horses. 446

Total. 15,830 12,207

CATTLE AND SHEEP FROM SEVERAL STATES.

Cattle. Sheep.

Maine..... 408 556 New York 184

N. Hampshire 811 132 Western 13

Vermont 157 1026 Eastern 425 4381

Massachusetts 229 Canada 233 4365

Total. 15,830 12,207

CATTLE AND SHEEP BY RAILROADS, ETC.

Cattle. Sheep.

Fitchburg 4227 556 Eastern 425 4381

Lowell 2,235 H. & M. 2,235

B. & A. 348 Foot & boats. 93

Total. 5,301 12,207

Values on Northern Cattle, etc.

Heft — For hundred pounds on total weight of live cattle, \$1.00 per lb.; for steers, \$1.00 per lb.; for heifers, \$1.00 per lb.; for calves, \$1.00 per lb.; for lambs, \$1.00 per lb.; for hogs, \$1.00 per lb.; for veal, \$1.00 per lb.

Working Oxen. — \$600/130; hand steers, \$60/100, or much according to their value for beef.

Cows and Young Calves. — Fair value, \$20/60;

100/60; very nice milch cows, \$30/67;

farm and dry, \$12/22.

Stores. — Thin young cattle for farmers: yearlings, \$8/16; two-year-olds, \$12/22; three-year-olds, \$20/30.

Sheep. — Per pound, live weight, 23/4c.; extra, 21/4c.; sheep and lambs per head, in lots, 21/4c.; 5/4c.; 5/4c.

Fat Hogs. — Per pound, 4/4c.; live weight: dressed hams, 5/4c.; dressed, 5/4c.

Veal Calves. — 21/2c./5c. per lb.; country lots, 5/4c./7c.

Hides. — Brighton, 7/4c./8c. per lb.; country lots, 8c./10c.

Calves Skins. — \$1.40.

Tallow. — 3c. c. per lb.; country lots, 4c./5c.

Pelts. — 15c./\$1.00 each; country lots, 15c./\$1.00; fair skins, 35c./55c.

ARRIVALS AT THE DIFFERENT YARDS.

CATTLE, SHEEP, HOGS, VEAL, HORSES.

Watertown. 4239 11,407 15,104 1109 366

Brighton. 812 800 11,938 639 80

General Live Stock Notes.

With increased numbers of Export Cattle we can make a good showing of arrivals; then, too, there is more call for cattle for the home trade; as the supply of cattle from the West is not so much of such cattle as come to the yards and let up somewhat on Western. Sheep is fair demand at last week, but not so good as last week, and bid low on anything else. A good number of Canada Lambs this week for home and foreign trade. Western Hogs are well supplied, and liberal arrivals exist. Country lots 3/4c. D. W. lower. Calf stock shows firmness, and 5/4c. paid, but mostly at 5/4c./6c. Values on Milch Cows as last week. Horses are not moving with activity, but the better class are wanted but do not arrive plenty.

Cattle. Sheep.

Harris & F. E. French 10

At Watertown. H. N. Jenne 11 45

F. H. Henley 10 45

B. G. McIntire 400

M. J. Philbrick 32

J. P. Berry 22

A. J. Lippy 16

B. H. Thompson 152 140

J. Weston. 18

Consignments 4225

Thompson & H. N. Jenne 11 45

At Brighton. R. I. & C. E. Alafair 13

F. H. Hall 20

B. G. McIntire 15

At Watertown. Canada 81

J. Gould 10

J. H. Hatha 10

J. Weston. 18

Consignments 4225

Boston & A. F. Jones 10

At Watertown. C. A. Burdick 184

Massachusetts. 70

At Watertown. J. S. H. Jenne 10

W. H. Hall 20

B. G. McIntire 20

At Watertown. 12

W. H. Hall 20

B. G. McIntire 20

At Brighton. H. N. Jenne 8

E. H. Evans 14

C. D. Lewis 14

J. D. Day 20

J. H. Hatha 56

R. F. Conner 14

M. D. Holt 20

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At Watertown. J. S. H. Jenne 10

W. H. Hall 20

B. G. McIntire 20

At Watertown. 12

W. H. Hall 20

B. G. McIntire 20

At Brighton. H. N. Jenne 8

E. H. Evans 14

C. D. Lewis 14

J. D. Day 20

J. H. Hatha 56

R. F. Conner 14

M. D. Holt 20

F. H. Hall 20

B. G. McIntire 15

At Watertown. Canada 81

J. Gould 10

J. H. Hatha 10

J. Weston. 18

Consignments 4225

Boston & A. F. Jones 10

At Watertown. C. A. Burdick 184

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B. G. McIntire 20

At Watertown. 12

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At Brighton. H. N. Jenne 8

THE HOUSEHOLD.

TO BY-LOW LAND.

My little dears, the star-lamps
Are lighted over-head,
To guide all sleepy children
From the land of Go-to-Bed,
On a most delightful journey;
With a song, a glad go
To that pleasant, pleasant country
Where the dream-flowers grow.
You'll find a good steed waiting,
So mount and give command,
And trot away, and trot away
To By-Low Land.

You can go by like Sleepy Hollow,
With the goblins to take
On the journey you are going,
From the plains of Wideawake.
You'll be there before you know it;
Shut your drowsy eyes, and lo!
There where the dream-flowers grow.
Your good steed's waiting for you,
So mount and give command,
And trot away, and trot away
To By-Low Land.

You start upon your journey,
Mother wants a hug and kiss,
From each drowsy little darling,
And is softly to bid her kiss.
She'll be keeping you when you've left her,
She's glad to have you go
To that pleasant, pleasant country
Where the dream-flowers grow.
Your good steed's waiting for you,
So mount and give command,
And trot away, and trot away
To By-Low Land.

—Washington Home Magazine.

KING EDWARD.

You want a story? Well, children, I don't know whether you'll call it a story or not. It's all about the school I went to in the Far West, out on the edge of the woods, and a couple of miles from the village,—a long stretch for short legs, and too long a walk for the teacher, Miss Mills, who used to ride over from Deacon Potter's, where she boarded, on the queer little donkey, "King Edward." Most donkeys are called, "Neddie," you know. And Miss Mills's pet had a finer name, you see; and he wouldn't answer to any other. He had the loudest bray and the longest ears of any donkey that ever lived. Lucky that for us, as it turned out.

It was a queer school-room, you would say. The desks were slabs at angles, and the boys had all cut their names on them. In one corner there was a shallow box full of fine white sand. The little ones began to write by making the letters in the sand with skewers. When the lesson was over, Miss Mills smoothed the sand with a rolling-pin; and there it was again. I learned to write that way. Slate came next, paper afterward.

Miss Mills did the best she could with us; and King Edward helped keep school by putting his head in at the window every now and then, and braying. That always made any new scholar shriek. Then the rest of us would laugh.

Miss Mills said she was thankful when winter came, because she could shut the windows and keep King Edward's head out. But, though it was as cold as Greenland when we first got to school, the great fire that was piled up in the big wood stove would begin to roast us all by eleven o'clock; and then up would go the window, and in would come King Edward's head, and his bray.

I remember, on the day that I am going to tell you about, Jim Burke, a boy who was always up to mischief, had brought over an old sunbonnet of his mother's, and tied it on to King Edward's head, putting the long ears through two holes he had cut for them.

"There'll be fun when he looks in," he said to two or three of us who were in the secret. "Don't tell any of the girls. I want to hear them screech."

We were all singing, "Twice one are two, twice two are four," in chorus, I remember; and Jim had his eye on the window, watching for King Edward, when the door moved.

"King Ed. is coming in that way," whispered Jim. Miss Mills heard him, and turned her head.

"That is a little too much," she said, and stepped forward to put the donkey out, but stopped half-way, turned pale, and looked as if she was about to faint. The next moment the girls were shrieking, and the boys shouting, for in walked a bear.

It was a cold winter; and the bears were hungry in the woods, and getting savage. The men were going off for a bear hunt that week, and the children were all forbidden to go into the woods; but none of the animals had come up into the settlement as yet. Nobody wanted them to. A hungry bear is a dangerous beast, and we all knew it. This was a gaunt, wide-mouthed, red-eyed "critter;" and he glared at us furiously.

None of us dared to run for the windows; for they were on the same side as the door, not very big, either. Miss Mills couldn't have got through one of them. The bear was doing very queer things, moving his head round and round, but never taking his eyes off of us.

Soon the bear growled again, and took a step toward us; and at that moment, in at the open window came the queerest thing,—King Edward's head, his long ears thrust through the holes in the sunbonnet, the ribbon tied in a bow under his chin, his mouth opened, staring at the bear through his white eyelashes, and braying as he had never brayed before. The white cap of the sunbonnet flapped and rustled, the roar of his voice filled the room; and that bear! Well, children, anything an animal has never seen before is sure to scare it; and such a sight as Ned was at that minute!—nothing to be seen of him but his head, and such a voice as the Lord gave him for that occasion no bear surely ever heard before. There have been folk that have said I exaggerated this story; but I'm giving you facts, children, when I tell you that, when King Edward brayed, that bear dropped on his forelegs, turned tall, and waddled out of the door as fast as his feet could carry him, and off to the woods, King Edward, in his sunbonnet, kicking up his heels, and braying over the fence at him all the way.

As for Miss Mills, as soon as she could get her breath again, she made us all go down on our knees and say our prayers, and then gave us a half-holiday, and got the nearest farmer to take us all home in his great wagon.

Proud of a Patch.

A poor boy, with a large patch on one knee of his trousers, was laughed at by a schoolmate, who called him "Old Patch."

"Why don't you fight him?" cried one of the boys. "I'd give it to him if he called me so."

"Oh," said the boy, "you don't suppose I'm ashamed of my patch, do you?"

"For my part, I'm grateful for a good mother to keep me out of rags. I'm proud of the patch for her sake."—Sunday School Advocate.

The more I live, the more I love this lovely world; feel more its Author in each little thing, in all that's great. But yet I feel my immortality the more.—Theodore Parker.

MASSACHUSETTS PLOUGHMAN BOSTON, MASS., SATURDAY, SEPTEMBER 18, 1897.

THE HOME CORNER.

FREE PATTERN.

By arrangement with the BAZAAR GLOVE-FITTING PATTERN CO., we are able to supply our readers with the *Bazar Glove Fitting Patterns* at very low cost. It is acknowledged by every one that these patterns are the most economical and most reliable patterns published. Full directions accompany each pattern, and our lady readers have been invariably pleased, and the cost of the pattern will accompany each order, otherwise the pattern will cost the full price.

THE DANDELION'S COMPLAINT.

Oh dear! Oh dear!
How strange I must appear!
My head is so bare;
That every one will stare
At me now.

Once like a golden star
I shone out from afar;
Then a light feey down
Made me grow down
On my head.

But this morning—oh dear!
It all went so fast.
There came a little loss,
And passed upon the grass
By my side.

I bawled them all away
And wish," I heard her say,
But I know I shall take cold,
And it makes me look so old—
Ooh, dear!

—St. Nicholas.

THE LITTLE WHITE BEAN.

"Dark! dark!" said the little white bean, as he tried to make more room for himself in his earthly bed.

"Where am I? What's the matter? Am I—and in the midst of his wriggling and muttering, he actually burst his little white coat. He was wide enough awake by this time. Like Rip Van Winkle, he spent some time in trying to think just where he had been and what had happened before he had gone to sleep, but, unlike Rip, he could not clearly recall the past.

"I wonder what is to become of me," mused he aloud. "I am so cramped down here," he fretfully said the next moment.

"Oh! what's this?" laughed he, as he saw something peeping out from the rent in his coat. Whatever it was, he held his attention for at least two minutes, which is a long time for a bean to give attention.

"How tight my coat is," said he as he twisted his shoulders.

Snip! went the seam in his little coat.

The little bean drew a long breath, and knifed his brow in thought.

"Ah! I grow," said he.

Alas, little beans, too, have their worries and troubles.

This one grew really vexed about the way in which he ought to grow. He first thought to go up and then to go down. Even after he had decided to go up, he continued to go down, or rather which he had found in the rent in his coat grew downward.

Somehow, it had crept into the head of this little bean that it was to be his lot to repeat the story of "Jack and the Bean-ster." How he fretted about his seeming failure, for down, down went his little white arm, while from its tip, reaching out in every direction, grew tiny white fingers.

One afternoon, when the sun had shone bright and warm way up overhead, the little bean felt the burning of fever in his veins. "I thirst," said he, and quickly those tiny fingers took up water and sent it to him. This so refreshed the little bean that he said, "To-morrow I will surely begin to go up."

The next morning, when he awoke, he seemed fairly bursting with pain. "Oh! oh!" cried he, as he held his aching sides.

"Pop!"

This time, not only his coat, but even his plump little body was made to gap. When he had recovered from his surprise, he peeped into the gap, and what do you suppose he saw?—a tiny pair of cramped leaves.

Every day those little leaves grew larger and larger. More and more did the halves of the little bean spread apart.

One morning he awoke to find everything changed. After rubbing his eyes (a habit little beans have), he glanced upward and saw the beautiful sunlight streaming down to him through several brown cracks in the earth overhead. "I will start upward right away," said the little bean.

Several days passed before he was really above ground, and then he hardly dared lift his face toward the sun. In the meantime, the pair of tiny leaves had shot upward, leaving the poor little bean behind.

"Oh! if I were only a pair of green leaves," sighed the little bean. He could think of nothing else. "O—s—s—please, please turn me into a pair of green leaves!" he said, again and again. He really did become green and leaf-like. Why was this? Do you think that the last word that the little bean had so often asked him to do, or was he thus changed because of his jealousy of the little green leafy dainty.

Just as the flower bows have been used this season, silk folded into the semblance of flowers will be approved this winter.

Suppose a pretty, fashionable hat to wear from October 15 until after the Christmas mark-downs is wanted, and you have for materials, a few old feathers, some "elderly but respectable" velvet, and a little bunch of velvet roses. Do not try to cover a frame (few amateur milliners can do that well), but take your last year's hat and give it a thorough brushing and cleansing. Then take the velvet, get all the dust out of it and hold it over the steaming tea kettle; take a very hot iron and while another person holds it, rub it over the smooth part of it, right side up of course. Wipe every particle of dust and dirt from the feathers, with a dry cloth, and curl them with a dull knife.

Cut a circular piece of velvet perhaps sixteen inches in diameter, and set it on a Tam O'Shanter crown. Cut another piece of velvet, about four inches wide, and fold it loosely around the crown. After curling the feathers, bunch them gracefully at the left side, having them curl towards the outside and back. Buy a little buckle or pin at ten or fifteen cents and clasp it in the centre of a small flat bow of velvet, and put it over the place where the feathers are set on.

Now for the roses. If they are worth using, buy a yard of black lace, gather half of it in a fan-like shape, and set it, with a rose in it, in the right back of the hat. Now gather a small piece of velvet into a rosette and sew it side by side with the lace and the rose. Next, the rest of the lace with another rose, and then another velvet rosette. You will now have a pretty useful hat at the cost of about thirty cents and a little time.

Provision is made every year for the young ladies and the matrons in the fashions, but we seldom hear what the lady of sixty to seventy-five is to wear, and a word about her winter bonnets would not be amiss.

Jet bonnets are always pretty and as cool and neat looking in summer as straw. This fall trim with white lace and violets, yellow violets, red roses

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I shone out from afar;
Then a light feey down
Made me grow down
On my head.

But this morning—oh dear!
It all went so fast.
There came a little loss,
And passed upon the grass
By my side.

I bawled them all away
And wish," I heard her say,
But I know I shall take cold,
And it makes me look so old—
Ooh, dear!

—St. Nicholas.

MASS. PLOUGHMAN COUPON.

Cut this out, fill in your name, address, number and size of pattern desired, and mail it to
THE HOME CORNER, MASS. PLOUGHMAN,
BOSTON, MASS.

Name
Address
No. of Pattern
Size
Enclose ten cents to pay expenses.

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OUR HOMES.

THE SILENT MARCH.

When the march begins in the morning
And the heart and the foot are light,
When the flags are all a-flutter
And the world is gay and bright,
When the bugles lead the color
And the marchers press on in the van,
Up shoulder to shoulder, forward, march!
Ah! let him lag who can!

For it's easy to march to music
With your comrades all in line
And you don't get tired, you feel inspired,
And life is a drafty ride.

When the march drags on at evening
And the color-bearer's gone,
When the merry strains are silent
That piped so bravely in the dawn,
When you march with your old fellows
With spirit out with you,
When it's stubborn and sturdy, forward march!
Though the ragged lines are few.

Then it's hard to march in silence,
And the road has lonesome grown,
And life is a bitter cup to drink;
But the soldier must not moan.
And this is the task before us,
A task that's never done.

In the time are the sorrowful time
We must march when the music cheers us,
March when the strains are dumb,
Pucky and valiant, forward, march!

And smile, whatever may come.

For, whether life's hard or easy,

The strong man keeps the pace,

For the desolate march and silent

The strong soul finds the grace.

Margaret E. Sangster.

HOW ABIGAIL WON DAVID

A TRUE STORY.

Three-quarters of a century ago Widow Mary Goss was living on Middle street in Marblehead with her family of seven children, the youngest a babe. That season the father of the household had sailed away for the banks of Newfoundland. The last fishing vessel had rounded Point Neck, but Joshua Goss and his crew never returned. Months of anxiety mingled with hope and fear had given place to a resignation that was despair. Every footstep heard upon the stairs during these terrible months had startled the poor widow into the hope that it was finally the return of the long missing father, and her all-devouring eyes and those of every child, all as still as death, were at the door when it would open but to admit some sympathizing friends who often dropped in with attempts to comfort her by repeating stories traditional in town of fall bankers which had been blown far out of their course to the distant West Indies, from which they did not reach home till the next spring; or of instances like Mr. Sam Russell, who was saved by the fluke of the anchor of the vessel which ran them down, catching his clothing: or of the Skipper Sam Ronny who landed on the deck of the passing vessel while all others sank to a watery grave.

As the dark months passed, Mary Goss knew that the epitaph written of so many sons of Marblehead, "Lost at Sea," was to be that of the father of her children.

She was a woman of superior mind, with sound common sense and energy, possessed of a high self-respect with sound bodily health and a noble presence, and having in her heart that intense love of offspring which has always characterized the mothers of Marblehead.

To the solicitations from her relatives to adopt any of her jewels, this modern Zenobia turned a deaf ear and resolutely used all her capacities to meet the requirements of her trying situation, which she did by taking in washing and miskin the most of every opportunity. Thus month after month and year after year, she fought her battle with poverty.

The fight went hard with Mary Goss, for at times there was but a single baker's loaf on the table for a meal for her family of rugged children, and then it was enough to make pitying angels weep to see the mother endeavoring to persuade her children that she was not hungry while every child was insisting that mother would have his or her piece!

And the children were worthy of that noble mother; little Dick, scarce ten years old, got from a neighbor the job of sawing five cords of hard wood, and did it with the help of a kindly hand now and then in putting on the wood horse a heavy stick, and little hero that he was, when one of his fingers was accidentally sawed off by his older brother, exclaimed to comfort him, "Don't cry about it, Josie; here, you may saw off another one."

Several of the girls as they entered their teens, as was common in those days, "went out to service." Of these were Abigail, a beautiful girl with peach-brown complexion and rosy cheeks, and of frank, hearty, sympathetic good nature.

Abigail took service in the neighboring town of Lynn in an excellent family of Quakers by the name of Bassett. Here she soon became a favorite and was treated like one of themselves.

These were the days when marketmen went with their produce from door to door. Now there called at the Bassett's, three times each week, young David Osborne from Danvers with his load of vegetables.

David was a son of Paul and Eunice Osborne, a Quaker family, highly respected by their neighbors and well remembered by aged citizens now living. He was a stout, well-built youngster, large bodied and large of brain, gifted with excellent sense, which made him the man of weight he became in his neighborhood in later years.

David's market-wagon was after the model of those days, a single horse team, the body of the vehicle being very high at the sides and made with a rising curve both fore and aft. Near the front was stuck a stick on whose sharpened branches were impaled a potato, ear of corn, onion, turnip, a sample of what he had for sale.

David had gradually acquired a round of customers among the house-holders in the village, as Lynn then was, who depended on him for their supply of vegetables. Among these were the Bassets, where pretty Abigail Goss worked at service.

As the weeks passed on, father Paul began to notice that David appeared to pay little respect to the weather and was as ready to set out on his marketing a rainy day as a fair one; and with her mother eye, Eunice had noticed that

son David was paying more attention to his personal appearance.

"Doth she notice, Ennise," said farmer Paul, "what a dutiful son our David has become, and that in his zeal for marketing he makes little account of the storms which keep most men at home?"

Mother Eunice had been noting it and had her own mother thoughts as to what might possibly account for this remarkable zeal in her boy, but, like a wise mother, she kept them to herself.

"He told me I was a good marks-

"Was that all?"

"He said I might try it again as often as I wanted to."

"Was that all?"

"Why, yes, about all," replied Abigail, coloring to the tips of her ears, and with downcast eyes looking intently on the stocking in her hand, as though it needed some very particular attention just then.

"But, Abigail," said Mrs. Bassett, leaning towards her with a quizzical manner, "didn't David really say something more?"

"Yes, he said something more to me, but I don't believe he would want me to talk about it," said the confused girl.

"Now, Abigail," said Mrs. Bassett with an attempt at seriousness in her manner, "honestly, didn't he kiss me?"

"Yes," she murmured with her head turned aside.

"And, of course, thee boxed his ears soundly for such downright impudence, now didn't she, Abigail?"

In a moment Abigail's eyes were turned full on Mrs. Bassett, with a blaze of indignation, as with intense feeling she exclaimed: "What, box David's ears, Mrs. Bassett; why, he course I didn't!"

Mrs. Bassett burst into a hearty laugh, dropped her knitting and threw her arms around the astonished girl, drew her to her heart and kissed her again and again. "You little goose gander, of course they didn't; of course they didn't. Now let me tell my little Abby a bit of a secret. I began some time ago to note the long calls the young man was making in my kitchen, and, mistaking what it meant, I have made it my business to inquire through friends in Danvers what sort of a youngster it was that had taken a fancy to my Abby, and now I am very happy to be able to say that the testimony was all one way, as to his respect for his parents, good morals, good habits and industry, and so if I am finally to lose my little girl, I know it will be to one worthy of her. But Abby! Abby! thy ball of dough; it is the comicalst courtship I ever heard of!" And laughing heartily, with mutual kisses, they parted for the night.

When David returned home, as usual, he handed the purse containing the monies received for marketing his vegetables to his mother. But this morning instead of going as usual to once to his farm work, he tarried. This drew his mother's attention, and with a tone of anxiety in her voice she asked, "Is all well with thee, David?"

"Yes, mother, all is well, but in truth, I have not paid thee all I got this day."

"And why not, my son?" she asked with some surprise in her voice.

"Because, mother," said the boy going up to her, laying his hand gently upon her arm and looking lovingly into her face, it was something altogether too large and valuable to put in that purse, for, mother, it was the precious love of one whom I hope to bring home to you all these days to be a dear daughter to you and father."

David, noticing her discomfiture, laughed heartily at the manner as good and so endeavored to cheer her up.

A half-hour's hard work with repeated washings of the face and combings of the hair with her nimble fingers finally removed all traces of the sticky mass.

Meanwhile poor, confused Abigail was profuse in her stammered apologies and as David was human, the sorrow of the girl so dear loved was a temptation beyond even a Quaker boy's endurance, and with an involuntary impulse, as led Abigail to throw the dough, he drew her to his heart and tenderly kissed her, and the barriers being broken, told her of his love.

There must have occurred a wonderful thing, an instantaneous conversion to the Quaker doctrine of non-resistance, for the crying girl laid her head on David's shoulder and half-whispered, "Oh, David you will forgive me, you know I didn't mean anything?"

"Forgive!" exclaimed David, "why, my dear girl, what have I to forgive? The half-hour those precious fingers were playing about my face were the happiest thirty minutes of my life. So do it again just as often as you choose," But, Abigail," added David with a hearty laugh, "thy heart must have been hidden in that dough for thou seest how it has stuck us together!"

And then they talked on as lovers will, till the warning clock compelled a tender good-bye, and one kitchen held the happiest girl in the village of Lynn, and in one market wagon drove whistling along the happiest youngster in Danvers.

When evening came, the supper dishes having been cleared away, the heart swept up and the general tidying gone through, so characteristic of our New England household, Mrs. Bassett and Abigail took their knitting work, sat down before the blazing fire of the open fireplace of those days, and soon the clinking of the needles under their busy fingers was the music of the room.

But the tender conscience of Abigail was troubling her, for she had wasted what did not belong to her. Finally her frank nature could hold its secret no longer.

"Mrs. Bassett," said she, "I'm very sorry I wasted some of the dough this morning."

"Wasted the dough, Abby, my girl," said Mrs. Bassett, "how was that; did thee burn some of the bread?"

"No, ma'am," demurely replied Abigail, coloring as she spoke, "I threw it away."

"Trew it away," repeated Mrs. Bassett in astonishment. "Why what under the sun led thee to do that?"

"Well, David provoked me—or rather I asked him if I might, and without thinking a moment, I threw it."

"Trew it where?"

"Why, at David."

"Trew it at David," exclaimed Mrs.

Bassett, dropping her knitting work and looking at the girl, "did it hit him?"

"Yes."

"Where?"

"In the face."

Then Mrs. Bassett burst into a hearty laugh that made her very cap strings tremble and as soon as she could contain herself exclaimed, "Well, he must have been a sight worth looking at; what did the young fellow say?"

"He told me I was a good marks-

"Was that all?"

"He said I might try it again as often as I wanted to."

"Was that all?"

"Why, yes, about all," replied Abigail, coloring to the tips of her ears, and with downcast eyes looking intently on the stocking in her hand, as though it needed some very particular attention just then.

"But, Abigail," said Mrs. Bassett,

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THE HORSE.

—Star Pointer again defeated Joe Patchen at Mystic last week. The black horse was game but Pointer has a little too much speed for him. Confident that Joe can beat Pointer his owner has arranged another race to be settled soon.

—Many of the old-time record-holders such as Director 2.05 1-4, Arion 2.07 3-4, Alix 2.03 3-4, are being worked and the fast youngsters of this year may witness some performances that will completely eclipse their own, next year.

—Since Star Pointer reached the goal toward which the American harness horse has long been striving, the question of whether the trotter can follow the pacer in the fight against two minutes has been extensively talked. Nearly all horsemen are aware that the bicycle sulky is a greater aid to the pacer than to the trotter. The pacing gait is not a weight-pulling gait and as the bicycle sulky is neither more nor less than a reduction of weight, the pacer is benefited in greater degree than the trotter.

Horsemen do not generally look to see Alix's record beaten much in the next few years, and they believe that the two-minute trotter is still a long way out of sight.—Worcester Observer.

THE BEST FARM HORSE.

In the first place I shall endeavor to give you my idea of the kind of horse most suitable to raise on a farm and at the same time command a good price on the horse markets. All success in the breeding of animals is based principally upon the proper selection of the parents and the treatment of the progeny.

Horses of any breed should have a form as is best suited to the purpose for which they are intended. The proportion of parts should be such as are constituent; no decided weakness anywhere for in an animal, as in a chain, the strength of the whole is practically determined by that of the weakest. What does a horse amount to even if he has the most perfect form in every other part, but is the victim of some other organic disease of the feet? The seat, or the way, of by far the most frequent forms of lameness in horses.

Perhaps there is less judgment shown in horse breeding than there is in any of the other animals on the farm. In my experience I have seen breeders use mares with blemishes and the victims of hereditary diseases for years, in some cases succeeding fairly well, but how many have failed to get any more than a common-looking scrub, with perhaps all and more blemishes than the dam, and could not get more than from \$30 to \$40 for the animal at five years old?

In selecting a sire he should be free from all hereditary diseases. It ought to be distinctly understood that it is a very bad policy to breed from an inferior or unsound sire or dam of any breed. He should have good, sound, well-shaped feet. His head, too, is really a very important part, since it contains the brain, and, in consequence, determines largely the psychic traits of the breed as well as the general intelligence and disposition. It must be clean cut, face straight, wide between the eyes, large, open nostrils, the eyes bold, lively, clear and expressive, strong and clean lower jaw, muzzle small, lips short and thin.

The neck should be symmetrical in length and proportions, strong, full at the crest, and clean at the throat. Shoulders oblique and muscular, sloping backward at the withers, shortening the back. Chest full and prominent; if it is not deep it is quite plain that the shoulder blades cannot be properly placed, and in order that abundant room be provided for heart and lungs, it should be barrel-shaped below and very wide above, which insures the ribs being well sprung. Forearm well formed, strong and muscular; his carcass roomy, barrel wide, large and round form, with the ribs curving from the short, strong back. Couplings smooth and strong, close ribbed and extending evenly over the point of the hip. Quarters must be well-shaped, of medium length and width, rounded and muscular.

The bones of the legs thin and flat, and must have no appearance of swelling of any kind, nor any kind of thickness. A large, wide, strong and clean hock. Knees straight, large and strong. Cannon bones short, clean and fat, with fine quality of silken hair. Pasterns strong, medium length, clean and sloping—Wisconsin Farmer.

Nothing equal to GERMAN PRAT Moss for horse bedding. Healthy and economical and widely used. C. B. Barrett, Importer, 45 No Market street, Boston, Mass.

Weather and Crops.
FOR WEEK ENDING SEPTEMBER 13.THE TIMES ARE OUT OF JOINT.
REFLECT!!THE MASSES want to be
HUMBUGGED!

So they buy inferior and dangerous soaps to procure WORTHLESS presents, or else the dealer recommends cheap soaps on account of extra profit.

THE BEST IS THE CHEAPEST.

If you want the **WORST** soap, buy the **WORST** soap, and the **WORST** presents, or else the dealer recommends cheap soaps on account of extra profit.

THEY HAVE NO EQUAL

and will injure the finest fabric or skin.

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BOSTON, MASS.

they take root and act as supports to the branch, thus aiding it to shoot farther out from the main trunk.

The tree thus becomes firmly rooted to the earth, and is able to withstand the terrible wind storms that would otherwise tear it from the ground or completely wreck it. This grand old tree has attained to the dignity of one of the wonders of the vegetable world.

When I visited this park and approached the tree I could but acknowledge a feeling of awe and wonder. There stood the venerable old tree that had defied the elements for many long centuries. Could it but speak what a tale it would have of passing years, the rise and fall of nations, of trees, and plants and flowers that have risen, come to perfection and wasted away at its very base. However, all that may be, there was the tree with its spreading branches and dense foliage. The supports of these branches appeared like colonnades. The grass underneath was worn off by the tread of many feet. The native gardener who was with us said it frequently happened that three large picnic parties would spread their lunches under the tree, at the same time, without in the least interfering with each other.

Stoughton Grange.

At the regular meeting of Stoughton Grange, Monday evening, September 13, a large number were in attendance. Mr. Beals of Brockton was present and delivered his very interesting lecture on Mexico which was greatly appreciated by all present. After the lecture the regular session of the grange was held. The next meeting will be ladies' night, and Sister Goldsmith was chosen chairman of a committee to furnish entertainment. Voted to have a fair some time in the near future and Brother L. H. Lamb was chosen as a committee of one to make arrangements for the same. A vote of thanks was extended Mr. Beals for his kindness.

AGRICULTURAL FAIRS
FOR 1897.

We shall be glad to receive information from secretaries relative to the dates of holding Fairs not included in the following list.

MASSACHUSETTS.

Amesbury & Salisbury, Amesbury, Sept. 28, 29, 30

Brockton Valley, Uxbridge, Sept. 28, 29

Bristol Co., Taunton, Sept. 28, 29, 30

Brockton, Brockton, Oct. 6, 7, 8, 9

Deerfield Valley, Charlton, Sept. 16, 17

Eastern Hampden, Palmer, Sept. 21, 22, 23

Franklin, Peabody, Sept. 21, 22, 23

Franklin Co., Greenfield, Sept. 23, 24

Hampshire, Amherst, Sept. 23, 24

Hampshire, Franklin and Hampden, Northampton, Sept. 23, 24

Hingham, Hingham, Sept. 29, 30

Hoosac Valley, North Adams, Sept. 30, Oct. 1

Oxford, Oxford, Sept. 21, 22

Spencer, Spencer, Sept. 23, 24

Wakefield Horticultural and Agricultural, Sept. 22, 23

Wellesley, West Newton, Sept. 22, 23

Worcester North, Fitchburg, Sept. 21, 22

Worcester North-west, Athol, Sept. 5, 6, 7

Worcester County West, Barre, Sept. 30, Oct. 1

MAINE.

Andover Farmers' Club, W. Sept. 28, 29, 30

Bangor, Bangor, Sept. 28, 29, 30

Bangor, Brooklin, Sept. 21, 22, 23

Bangor, Blue Hill, Sept. 21, 22, 23

Bangor, Damariscotta, Sept. 5, 7

Bangor, Northumberland, Sept. 21, 22, 23

Bangor, Penobscot, Sept. 21, 22, 23

Bangor, Piscataquis, Sept. 21, 22, 23

Bangor, Penobscot, Sept. 21, 22, 23